



**NATIONAL CRITICAL
CARE AND TRAUMA
RESPONSE CENTRE**

Royal Darwin Hospital Trauma Service

An innovative approach to Trauma Care in the NT

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www.ncctrc.com.au

Tyranny of Distance



Darwin :

- Dili 718 km (1hr)
- Denpasar 1759 km (2hrs)
- Jakarta 2736 km (3.5 hrs)
- Adelaide 2609 km (3.5 hrs)
- Perth 2651 km (3.5 hrs)
- Brisbane 2846 km (3.5 hrs)
- Sydney 3146 km (4 hrs)
- Melbourne 3140 km (4hrs)
- Singapore 3345 km (4.2hrs)



National Critical Care & Trauma Response Centre



THE HOWARD GOVERNMENT ELECTION 2004 POLICY

**ROYAL DARWIN HOSPITAL
EQUIPPED, PREPARED AND READY**



NATIONAL CRITICAL CARE
AND TRAUMA RESPONSE CENTRE

- Joint Commonwealth & NT Government initiative
- Centre for excellence Trauma & Disaster Response
- Royal Darwin Hospital “forward receiving” hospital
- AusMAT coordination activated by AHPC
- Strategic alliances key stakeholders



Royal Darwin Hospital



- 350-bed major Tertiary referral hospital for the Northern Territory, remote north Western Australia and South-East Asian region
 - 60,000+ presentations to ED per year
 - 35% admission rate
- 220 000 population
- 1.5 million tourists yearly

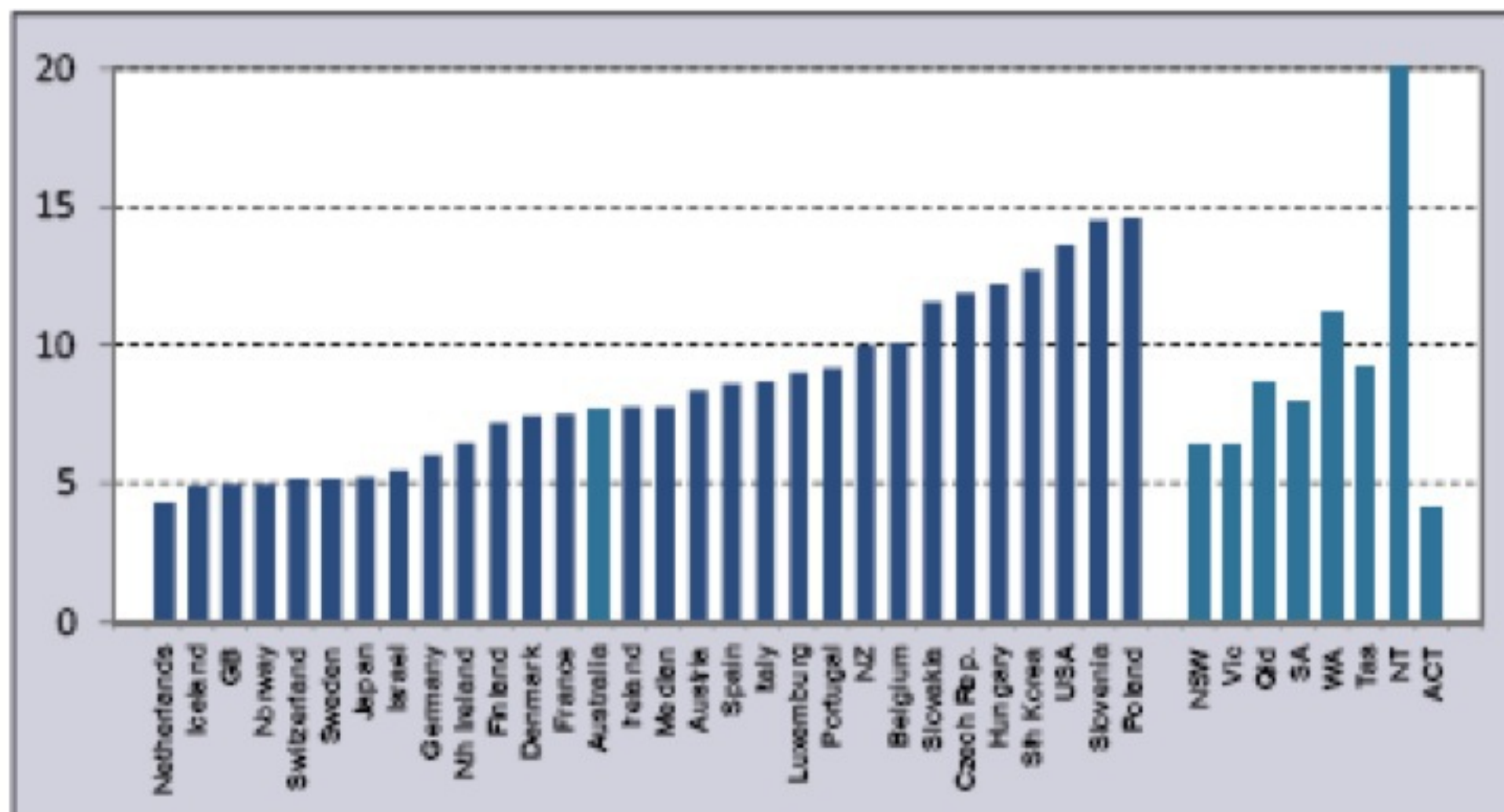


Trauma in the Top End



- NT has the leading death rate nationally from External causes
 - Transport related deaths are 3 times national average
 - Falls and Assaults also amongst the highest
- Aboriginal & Torres Strait Islander people 31% population
 - two thirds live outside of major urban centres
 - 3 times more likely to be hospitalised





Vision & Implementation 2008

- Trauma Coordinator role introduced
- Introduction of processes & systems to support staff at RDH in the delivery of best practice Trauma care
 - Holistic and Evidence-based case management
 - Shared Clinical governance model
 - Spectrum of Trauma Care
 - Prevention
 - Rural & remote Clinics
 - Pre-hospital (SJA and Aeromedical retrieval service)
 - ED
 - ICU
 - Wards
 - Rehabilitation

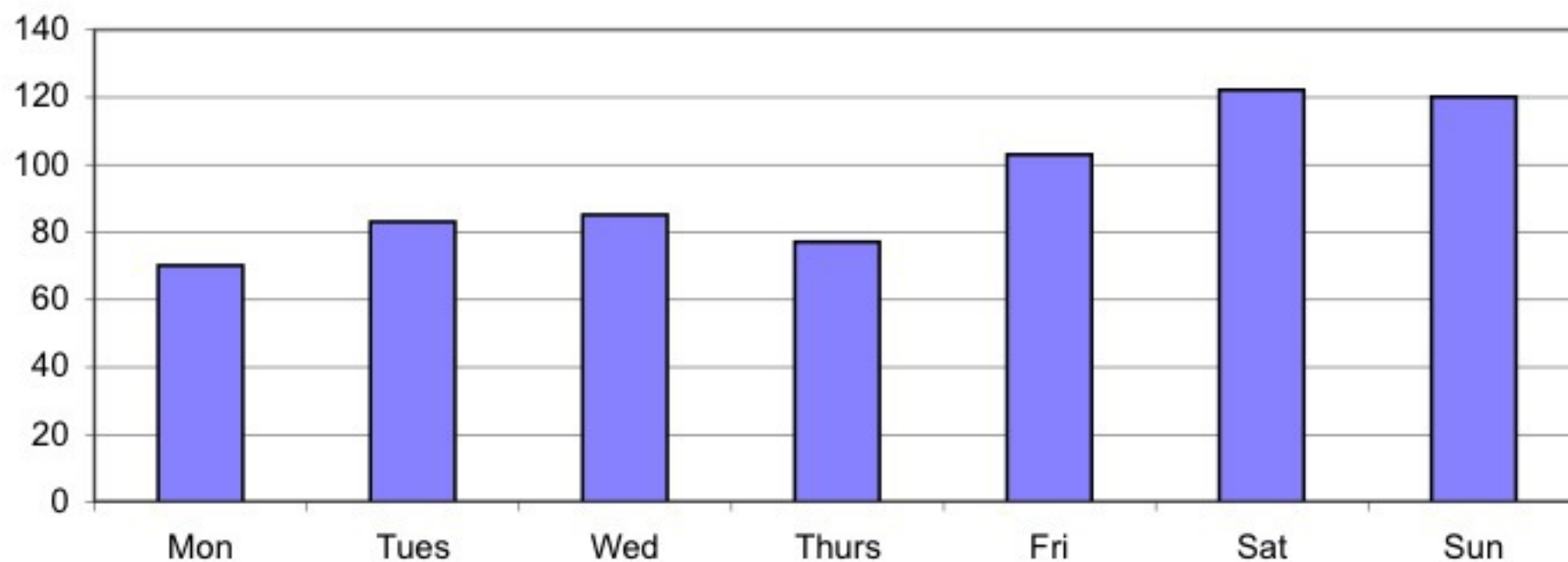


Model of Care 2009

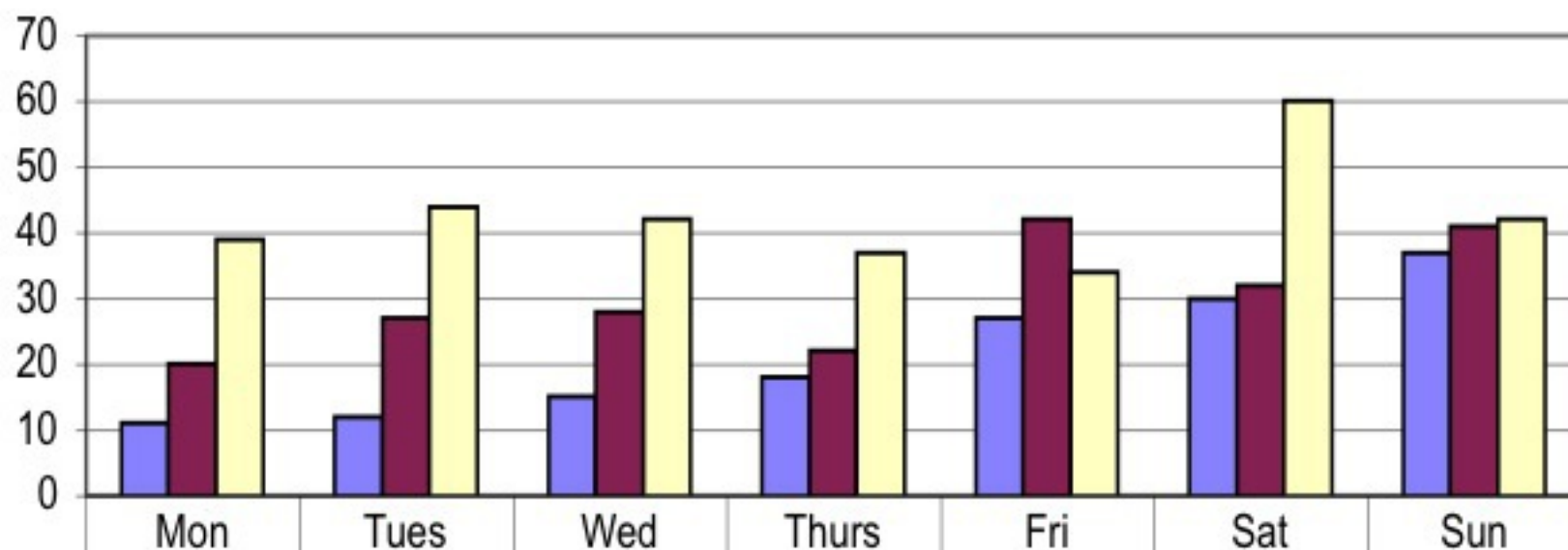
- Clinical Nurse Consultant care team
 - extended 12hrs / 7 day cover
 - Holistic case management coordination approach
 - Follows patient journey across phases of care
 - Evidence based, best-practice standards of care



ED Presentations by Day



ED Presentation Times by Day



	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
00:00-07:59	11	12	15	18	27	30	37
08:00-15:59	20	27	28	22	42	32	41
16:00-23:59	39	44	42	37	34	60	42



RDH Trauma Service 2010 - 11

- Director of Trauma
 - Trauma Coordinator
 - Orthopaedic Trauma Surgeon
 - Trauma Fellow
 - Trauma CNC (4)
 - Trauma Research & Registry
 - Occupational Therapist
 - Social Worker
- *Consultant specialist service*
 - *Coordination & liaison*
 - *Clinical Pathways*
 - *Education*
 - *Quality monitoring & Systems Improvement*



Initiatives

- Case management & coordination
- External links
- Tertiary Surveys
- Trauma Grand Round
- Trauma Management Committee
- Mortality & Morbidity
- PACS imaging
- Trauma registry & Clinical Indicators
- Clinical IT System reporting
- Trauma Nursing Program
- Mild Head Injury (mTBI) clinic
- PTA Screening protocol
- Spinal injury pathways
- Massive Transfusion protocol



Improvements

- Continuity of care
- Trauma Call Criteria
- Interstate Transfers
- Education
- Specialist clinical nursing support
- Patient advocacy & family meetings
- Improved equipment



Education

- Regular in-service session
 - Joint Grand Round breakfasts
 - Individual areas
- Courses
 - Trauma Nursing Program
 - EMST & EMSB
 - RATE & RPHTDC
 - MIMMS
 - Trauma Team training
- Clinical placement program
 - ADF
 - Balinese Hospital (Sanglah)
- Injury Prevention
 - Australian Defence Force
 - Riders NT
 - Liaison with Coroners, Police, NT Road Safety & Media
- RDH Specialist CNCs
 - Burns
 - Wound
 - Acute Pain
 - Rehab



Disaster response



- Integrated Trauma Service response plan
 - 24 hour surge capacity coverage
 - Trauma CNC in each key clinical area
 - Designated positions in Hospital field & AusMAT teams
 - Major events medical support



RDH Trauma Registry

Inclusion criteria:

- RDH admission
- Trauma Call or Alert
- ICU or HDU
- Died in hospital
- ISS >9

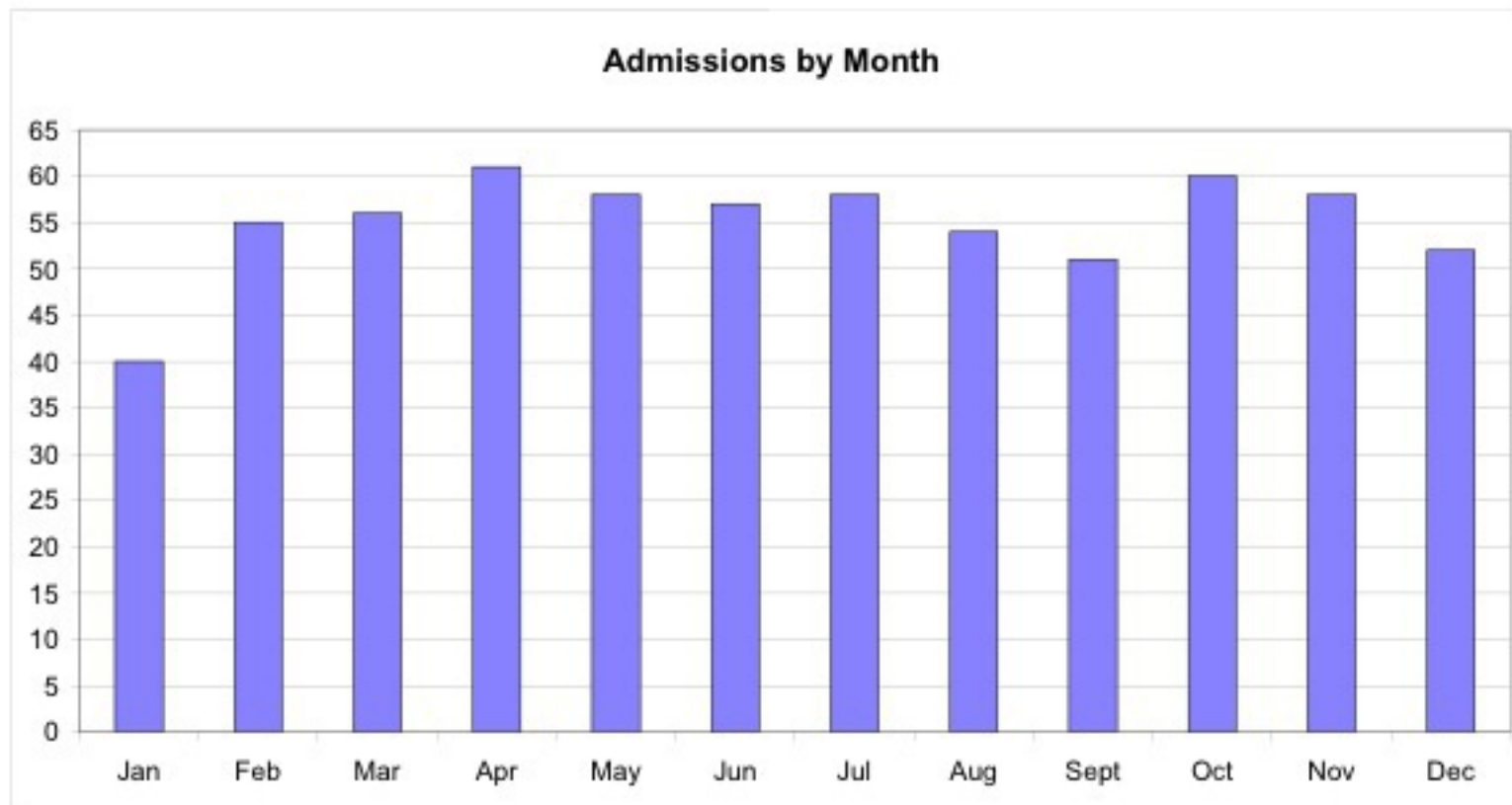


2010 snapshot

- 660 patients
 - 78 Intensive Care
 - 57 High Dependency
 - 526 Ward
 - 23 Deaths
 - 18 Transfers interstate
- 280 pts ISS >9
 - 82% Blunt
 - 13% Penetrating
 - 5% Burn



Seasonal activity

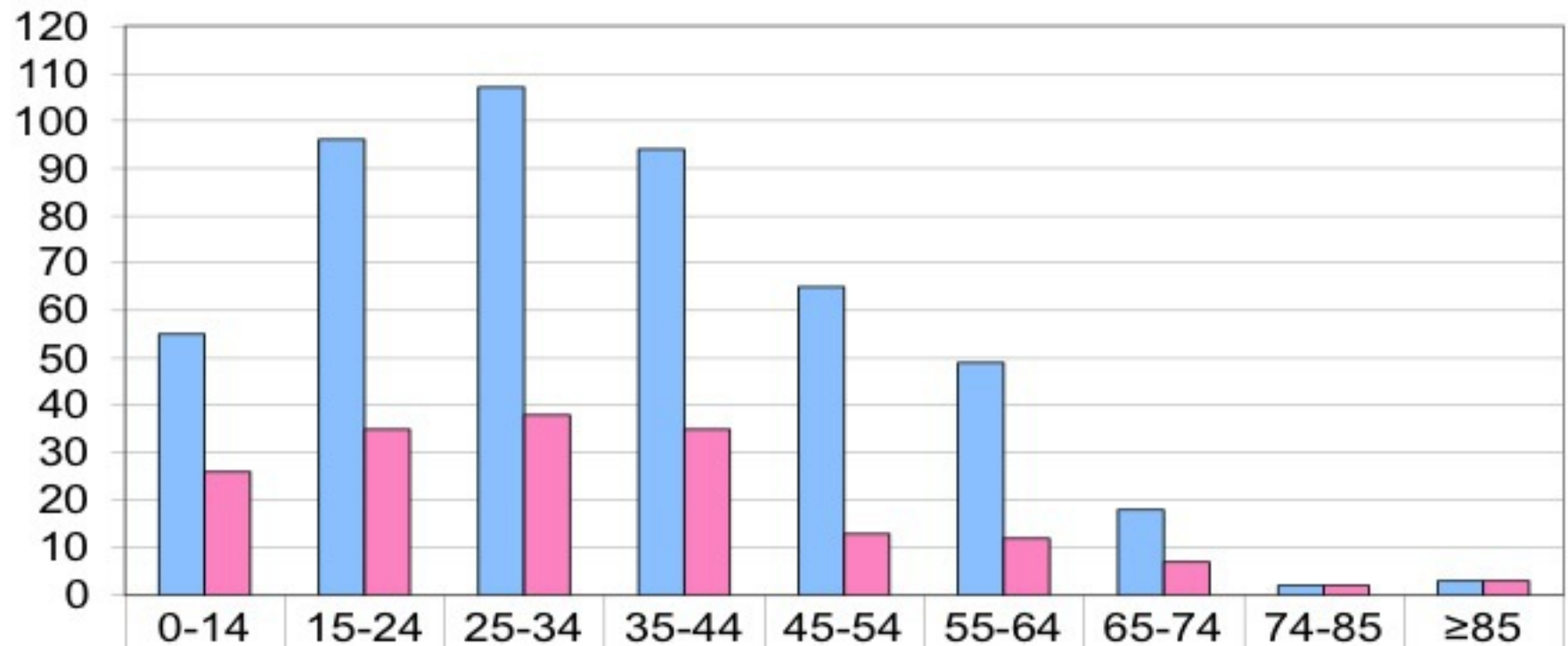


Mechanism



Age & Gender

Age Distribution by Gender

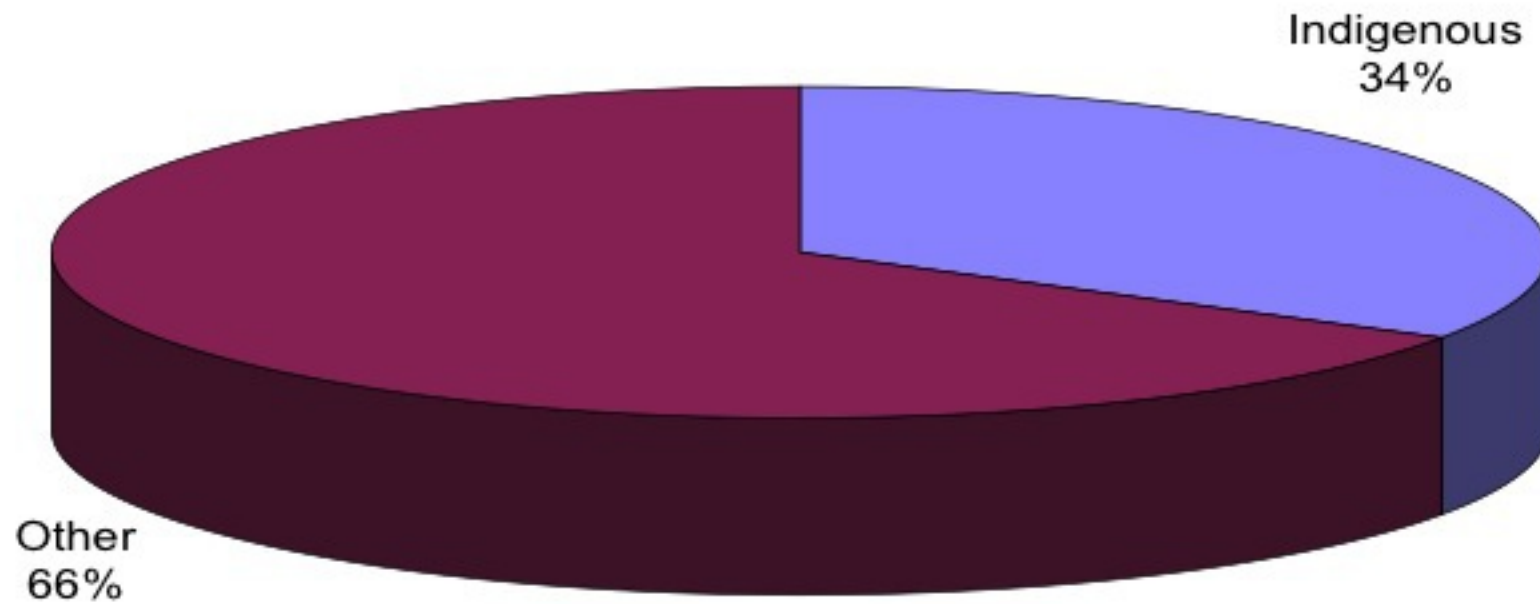


Male	55	96	107	94	65	49	18	2	3
Female	26	35	38	35	13	12	7	2	3



Ethnicity

Ethnicity Distribution 2010



Injury Severity

ISS by Month

